Remarks/Arguments

35 U.S.C. §103

Claims 1 and 5-12 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ammar et al. (U.S. Patent No. 2004/0203528A1) ("Ammar"), in view of Birleson (U.S. Patent No. 2007/0182866A1) ("Birleson").

Applicant first notes that claims 7 and 12 have been canceled.

The present invention, as recited by the amended claim 1, describes an outdoor unit of a reception terminal including a return channel, wherein the return channel (BUC) comprises: a local oscillator providing a signal with a frequency that can be selected from at least two frequencies, a transposition means that transposes a signal to be transmitted using the signal provided by the local oscillator, a wideband filtering means that allows through signals whose frequency corresponds to the transposed signal independently from the frequency of the local oscillator, and a configurable rejection filter depending on the frequency selected for the local oscillator; wherein the configurable rejection filter comprises a guided structure, wherein the cover of said guided structure transforms said configurable rejection filter into one of a band rejection filter that rejects a bandwidth corresponding to a leak of the transposition frequency or into a non-filtering element.

It is respectfully asserted that neither Ammar nor Birleson, alone or in combination, discloses a "configurable rejection filter [which] comprises a guided structure, wherein the cover of said guided structure transforms said configurable rejection filter into one of a band rejection filter that rejects a bandwidth corresponding to a leak of the transposition frequency or into a non-filtering element," as described in currently amended claim 1.

Ammar teaches a system of "a lightweight millimeter wave outdoor unit that includes a lightweight housing with a heat sink and mounting member configured for mounting on the antenna to form a wireless link. A millimeter wave transceiver board is formed of ceramic material and mounted within the housing. It includes a millimeter wave transceiver circuit that has microwave monolithic integrated circuit (MMIC) chips and operable with the transmit and receive boards. An intermediate frequency (IF) board has

components forming an intermediate frequency circuit operable with the millimeter wave transceiver circuit. A frequency synthesizer board has a signal generating circuit for generating local oscillator signals to the transceiver circuit. A controller board has surface mounted DC and low frequency discrete devices thereon forming power and control circuits that supply respective power and control signals to other circuits on other boards. A quick connect/disconnect assembly is operative with the housing for allowing the housing to be rapidly connected and disconnected to the antenna circuit contact members interconnect circuits between boards." (Ammar Abstract)

The Office Action asserts that Ammar discloses "basic circuit components where the low frequency transmitter signal would be received from a modem in the indoor unit (IDU) and into a diplexer 68 through an input/output port 68a. From the diplexer 68, signals can pass along the transmitter circuit chain 42 and be up-converted to an intermediate frequency (IF) and amplified. As illustrated, the signal from the diplexer is passed into a mixer 69 where the signal is mixed with a local oscillator signal generated from a local oscillator 70 as part of the frequency synthesizer circuit 52 to form the proper intermediate frequency. A bandpass filter 71 (read as wideband filter) eliminates certain spurious signals and frequencies by appropriate filtering. A variable gain amplifier 72 provides additional gain for the signal that is transmitted along the transmitter circuit chain 42 to components on the transceiver board. The signal from the variable gain amplifier 72 is mixed at a mixer 73 with another local oscillator signal to form the desired transmission frequency. A bandpass filter 74 filters unwanted and spurious signals (also read as wideband filtering). A transmit high gain amplifier 75 further amplifies the signal for transmission. The waveguide transition 76 allows signal conversion for transmission and also permits a signal loop for analysis via a loop back circuit 77. (figure 2 and paragraph 41)." (Office Action, page 3)

Ammar does not disclose, nor does the Office Action assert that it discloses, a cover of a guided structure which transforms a configurable rejection filter in a band rejection filter or into a non-filtering element. Therefore, Ammar fails to disclose a "configurable rejection filter [which] comprises a guided structure, wherein the cover of said guided structure transforms said configurable rejection filter into one of a band rejection filter that

rejects a bandwidth corresponding to a leak of the transposition frequency or into a non-filtering element," as described in currently amended claim 1.

Birleson teaches a system where "a broadband integrated receiver for receiving input signals and outputting composite video and audio signals is disclosed. The receiver employs an up-conversion mixer and a down-conversion mixer in series to produce an intermediate signal. An intermediate filter between the mixers performs coarse channel selection. The down-conversion mixer may be an image rejection mixer to provide additional filtering." (Birleson Abstract)

The Office Action asserts that Birleson shows, "in figure 1, that filter 109 is a band pass filter that provides coarse channel selection in tuner 10. As a matter of design choice, filter 109 may be constructed on the same integrated circuit substrate as mixers 103 and 110 (read as a configurable rejection filter depending on the frequency selected for the local oscillator) or filter 109 may be a discrete off-chip device. Filter 109 selects a narrow band of channels or even a single channel from the television signals in the first IF signal. Following IF filter 109, mixer 110 mixes the first IF signal with a second local oscillator signal from local oscillator 111 to generate a second IF signal. Mixer 110 may be an image rejection mixer, if necessary, to reject unwanted image signals. The characteristics of first IF filter 109 will determine whether mixer 10 must provide image rejection. If the image frequencies of the desired channel are adequately attenuated by first IF filter 109, then mixer 110 may be a standard mixer. (figure 1 and paragraphs 51-52)" (Birleson Abstract)

With regard to former claim 7, the limitations of which are now contained in amended claim 1, the Office Action asserts "Ammar et al., as modified by Birleson et al., disclose the claimed invention wherein the configurable rejection filter comprises a guided structure, wherein the cover of said guided structure transforms said configurable rejection filter into one of a band rejection filter that rejects a bandwidth corresponding to a leak of the transposition frequency or into a non-filtering element. (Birleson: paragraphs 16-17)" (Office Action, page 8)

The cited portions of Birleson explain "[0016] The present invention allows a wide band of frequencies to enter the front end of the tuner circuit without removing frequencies in an input band pass tracking filter. An input filter allows RF signals, typically in the range from 55-806 MHz, to enter the circuit while rejecting high frequency signals above the television band. The input signal then passes through a low noise amplifier that controls the input signal level. Following the input filter and amplifier, the RE signal is converted to an IF signal in a dual mixer conversion circuit. The conversion circuit generally upconverts the RE to a first IF signal and then down-converts the first IF signal to a second IF signal having a 45.75 MHz picture carrier. [0017] It is advantageous to have the up-conversion performed on-chip to avoid drive capability problems associated with high frequency signals and noise coupling problems resulting from integrated circuit external interconnections. Following the up-conversion, a first IF band pass filter performs coarse channel selection. The present invention next performs a down-conversion on the output of the first IF filter The down-conversion may be accomplished by an image rejection mixing scheme that provides for a higher level of image rejection than that provided solely by the first IF filter. The use of an image rejection mixer for down-converting the first IF signal is optional depending upon the characteristics of the first IF filter and its ability to reject unwanted signals." (Birleson, paragraphs 16-17)

Applicant respectfully disagrees with Examiner's assertion that this passage describes an apparatus where the "cover of said guided structure transforms said configurable rejection filter into one of a band rejection filter that rejects a bandwidth corresponding to a leak of the transposition frequency or into a non-filtering element." There appears to be no mention of a guided structure, a cover, or use of the cover to transform the filter. Therefore, Birleson, like Ammar, fails to disclose a "configurable rejection filter [which] comprises a guided structure, wherein the cover of said guided structure transforms said configurable rejection filter into one of a band rejection filter that rejects a bandwidth corresponding to a leak of the transposition frequency or into a non-filtering element," as described in currently amended claim 1.

In view of the above remarks and amendments to the claims, it is respectfully submitted that there is no 35 USC 112 enabling disclosure provided by Ammar or Birleson,

alone or in combination, that makes the present invention as claimed in claim 1 unpatentable. It is further submitted that currently amended independent claim 11 is allowable for at least the same reasons that claim 1 is allowable. Since dependent claims 5-6 and 8-10 are dependent from allowable independent claim 1, it is submitted that they too are allowable for at least the same reasons that their respective independent claims are allowable. Thus, it is further respectfully submitted that this rejection has been satisfied and should be withdrawn.

Having fully addressed the Examiner's rejections it is believed that, in view of the preceding amendments and remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant's representative at (609) 734-6804, so that a mutually convenient date and time for a telephonic interview may be scheduled.

No fee is believed due. However, if a fee is due, please charge the additional fee to Deposit Account 07-0832.

Respectfully submitted,

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